2000-118766/11 A96 D21 E13 (A26) OREA 1998.06.26
L'OREAL SA *FR 2780279-A1
1998.06.26 1998-008162(+1998FR-008162) *(1999.12.31)* A61K 7/40, 7/06

Cosmetic sunscreen composition containing benzimidazole derivative

C2000-036624
Addnl. Data: CANDAU D

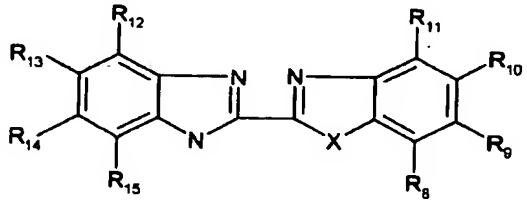
A(6-AE4, 12-V4A, 12-V4C) D(8-B9A) E(6-D5, 6-E1, 6-F1)

NOVELTY

Cosmetic composition contains a benzimidazole derivative (I) and an organomodified silicone (II) that does not absorb ultraviolet radiation.

DETAILED DESCRIPTION

The benzimidazole derivative is of formula (I):



(I)

X = S, NH, NR1 or O; R1 = 1-20C alkyl, 2-20C alkenyl, 3-15C cycloalkyl, 6-12C aryl, (6-12C)aryl(1-6C)alkyl, 2-21C alkoxycarbonyl or 5-12C heteroaryl, all optionally substituted by 1-6C alkyl, 1-16C alkoxy, 6-12C aryloxy, NH_2, OH, CONR2R3, COOR4 or $Si(OR7)_3$ or interrupted by ether bonds;
R2, R3 = H or 1-6C alkyl;
R4 = H, 1-16C alkyl, 6-12C aryl or $CH(R6)CH_2(OCH(R6)CH_2)_nOR5$;
R5 = 1-4C alkyl;
R6 = H or Me;
R7 = 1-4C alkyl;

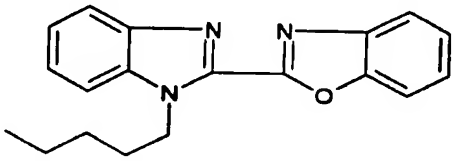
n = 0-4;
R8-R15 = H, NH_2, NO_2 or R1.

USE

For protecting the skin and/or hair from the effects of ultraviolet radiation, especially solar radiation.

SPECIFIC COMPOUNDS

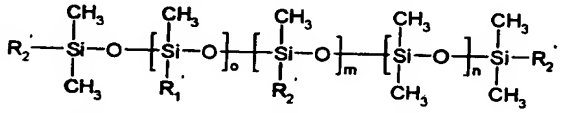
17 Compounds (I) are cited in claims, e.g. 2-(1-n-pentyl-2-benzimidazolyl)-benzoxazole of formula (Ia):



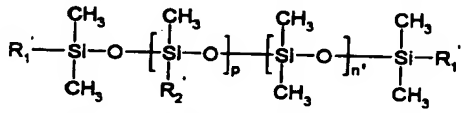
(Ia)

TECHNOLOGY FOCUS

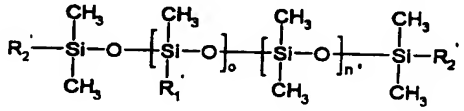
Polymers - Preferred Silicone: (II) is preferably selected from the following:
(1) alkoxylated silicones of formula (IIa)-(IId):



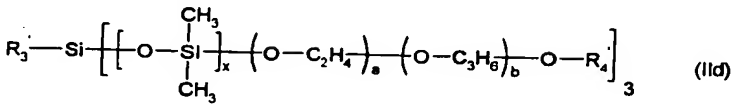
(IIa)



(IIb)

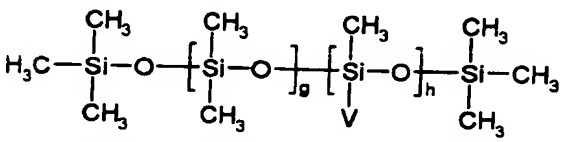


(IIc)



(IId)

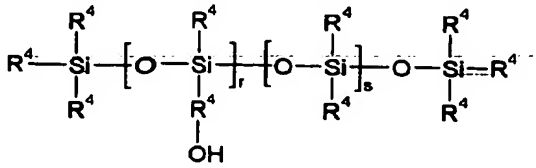
R1' = 1-30C alkyl or phenyl;
R2' = $C_cH_{2c}O(C_2H_4O)_a(C_3H_6O)_bR5'$ or $C_cH_{2c}O(C_4H_8O)_aR5'$;
R3', R4' = 1-12C alkyl, preferably Me;
R5' = H, 1-12C alkyl, 1-6C alkoxy, 2-12C acyl, OH, SO_3M, OCOR6', optionally N-substituted 1-6C aminoalkoxy, optionally N-substituted 2-6C aminoacyl, $NHCH_2CH_2COOM$, $(CH_2CH_2COOM)_2$ (sic), optionally substituted aminoalkyl, 1-30C carboxyacyl, phosphono (optionally substituted by 1-2 substituted aminoalkyl groups), $CO(CH_2)_dCOOM$, $OCOCHR7'(CH_2)_dCOOM$, $NHCO(CH_2)_dOH$ or NH_3Y;
M = H, Na, K, Li, NH_4 or organic ammonium;
R6' = 1-30C alkyl;
R7' = H or SO_3M;
d = 1-10;
m, o = 0-20;
n' = 0-500;
p = 1-50;
a, b = 0-50;
a+b = 1 or more;
c = 0-4;
x = 1-100; Y = an anion;
(2) carboxyalkyl silicones of formula (IIe):



(IIe)

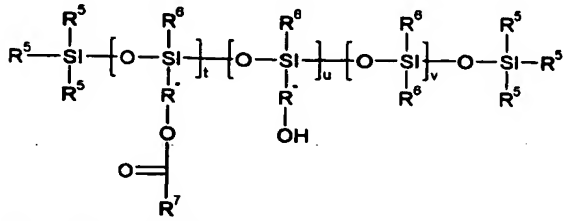
V = $(R1O)_eR2(OR3)_fCOOM$;
R1, R3 = 2-20C alkylene;
R2 = 1-50C alkylene optionally substituted by OH;
e = 0 or 1;
f = 0-200; M = H, alkali(ne earth) metal, NH_4 or quaternary

ammonium;
g, h = 0-1000;
(3) hydroxyalkyl silicones of formula (IIf):



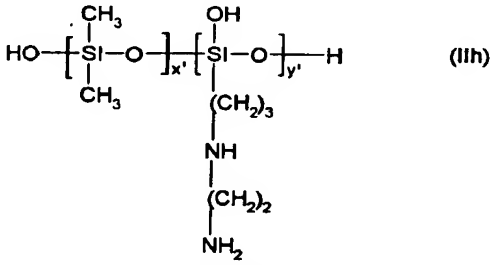
(IIf)

R4 = Me or Ph, at least 60% being Me;
R4' = 2-18C alkylene;
r = 1-30;
s = 1-150;
(4) acyloxyalkyl silicones of formula (IIg):



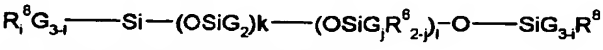
(IIg)

R5 = Me, Ph, OCOR5 (sic) or OH, provided that only one R5 group per Si atom can be OH;
R6 = Me or Ph;
R7 = 8-20C alkyl or alkenyl;
R = 2-18C alkylene;
t = 1-120;
u = 1-30;
v = 0 or less than 0.5 times t;
t+u = 1-30;
at least 60% of R5 and R6 are Me; groups of formula -Si(Me)(OH)-O- can be present in amounts not exceeding 15% of t+u+v;
(5) aminoalkyl silicones of formula (IIh):



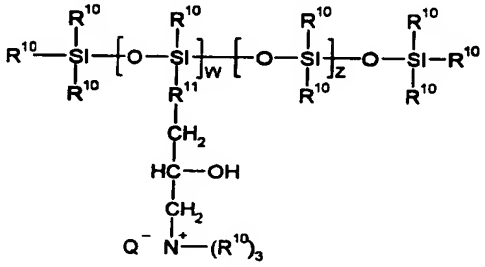
(IIh)

x', y' = numbers such that the molecular weight is 5000-500,000;
(6) cationic silicones of formula (IIi):



(IIi)

G = H, Ph, OH or 1-8C alkyl;
i = 0-3;
j = 0 or 1;
k, l = numbers (not coherently defined);
R8 = $C_qH_{2q}L$;
q = 2-8;
L = $N(R9)CH_2CH_2N(R9)_2$, $N(R9)_2$, $N^+(R9)_3A^-$ or $N(R9)CH_2CH_2N^+R9H_2A^-$;
R9 = H, phenyl, benzyl or saturated hydrocarbyl; A = halide;
(7) cationic silicones of formula (IIj):



(IIj)

R10 = 1-18C hydrocarbyl;
R11 = a divalent hydrocarbon group;
Q = halide;
w = 2-20;
z = 20-200.
(23pp367DwgNo.0/0)